

## 2013 WHIP Streambank and Shoreline Protection (580) Requirements

**Eligible lands:** Private agricultural land, private nonindustrial forestland, and tribal lands where streambanks are eroding and creating siltation, sedimentation and loss of stream shading resulting in negative impacts to aquatic species including threatened or endangered species.

### **WHIP Streambank and Shoreline Protection Practice Requirements:**

1. **All necessary permits shall be obtained by the participant.** Permits needed may include those issued by the Tennessee Department of Environment and Conservation, Tennessee Valley Authority (TVA), and/or US Army Corps of Engineers.
2. Eligible sites must meet the following conditions:
  - Perennial or intermittent stream (excluding gullies and sod waterways)
  - Streambank is exposed due to lack of adequate cover.
  - Have a bank less than 12 feet in vertical height as measured from edge of water at base flow if bioengineering is the only planned treatment.
3. Rock riprap revetments or gabions may be used in conjunction with bioengineering, jetties, and weirs.
4. **Rock riprap alone is to be used for stabilization only when other stabilization methods (jetties, bioengineering, instream structures) are not feasible;** if rock riprap alone is to be used as the primary stabilization material, the reasons for its use should be documented either in the design notes or the case file notes.
5. All components of this practice should be designed to have multiple benefits if possible. For jetties and weirs, pool and riffle creation (for habitat creation and diversity) must be emphasized.
6. A soil test is required for all disturbed sites scheduled for planting of permanent herbaceous plants. (University of Tennessee Lab or any certified NAPTP lab using UT testing methodologies). For NWSG, if pH is 5.0 or higher apply no lime; if lower apply 2 tons per acre. Do not apply nitrogen at planting.
7. All disturbed areas including channel banks beginning at low water line and any riparian areas scheduled for tree planting shall be first established to an approved native grass mixture. Eastern gamagrass shall not be planted within the channel banks.
8. Sloped back channel banks planned for vegetative stabilization shall be established to a minimum of 2 species of shrubs from seedlings or cuttings within the channel.
9. A minimum of two rows of trees shall be established beginning at the top of all stabilized streambanks within open agricultural fields. A minimum of three species of trees shall be used. Enough rows of trees with or without natural regeneration in conjunction with the shrub establishment within the channel shall be established to insure at least 35 feet (horizontal distance beginning at base flow waterline) of riparian forest buffer as required by the FOTG 391 practice will develop upon completion of the project. The establishment of a NWSG zone three at the crop or pasture interface should be considered in conjunction with the tree establishment.
10. In some circumstances where flood flows would overtop banks within concentrated flow or scour areas extending across downstream fields, it is permissible to establish tall fescue rather than a forested riparian buffer. The fescue planting area shall be limited to the minimally acceptable width of the concentrated flood flow (i.e. swale) so as to function like a spillway.
11. Planted herbaceous areas shall not be hayed or grazed by domestic livestock for the life of the practice.
12. Herbicides are to be used in accordance with the label for tame grass eradication or weeds or when the no-till planting method is used. Tame grasses are any sod forming grasses including tall fescue and bermudagrass.

Planting recommendations for **Streambank and Shoreline Protection** are given in the table below. NRCS area biologist may approve alternative species and seeding mixtures.

Temporary Cover – Winter		
Species	Amt/Ac	Seeding Dates
Winter Wheat	1.5 – 2 bu	Sept 1 – Oct 20
Cereal Rye	1.5 – 2 bu	Sept 1 – Oct 20
Temporary Cover – Summer		
Species	Amt/ac	Seeding Dates
Millet, Browntop	25.0 – 40.0 lbs	May 1 – July 1
Buckwheat	30.0 lbs	May 1 – Aug 1
Native Grass Mixture		
Species	Amt/ac	Seeding Dates
Eastern Gamagrass (PLS)*	10.0 lbs	Dec 1 – July 1
Switchgrass (PLS)* and Virginia Wildrye (PLS)*	15.0 lbs 20.0 lbs	Apr 1 – July 1 or Aug 15 – Oct 15
Eligible Trees (1 yr. old bare root seedlings)		
Species	Amt/ac	Seeding Dates
Yellow Poplar	302 (12'x12' spacing)	Nov 1 – Apr 1
Hickory		
Pecan		
Blackgum		
Persimmon		
Cherrybark Oak		
Willow Oak		
Overcup Oak		
Nuttall Oak		
Shumard Oak		
Black Oak		
Pin Oak		
Water Oak		
Swamp Chestnut Oak		
Swamp White Oak		
Birch, River		
Sycamore, American		
Eligible Shrubs (1 yr. old bare root seedlings)		
Species	Amt/ac	Seeding Dates
Bankers Willow	4,840/ac (3'x3' spacing)	Nov 1 – Apr 1
Coastal Plain Willow	4,840/ac (3'x3' spacing)	
Buttonbush	4,840/ac (3'x3' spacing)	
Gray Dogwood	680 plants (8'x8' spacing)	
Silky Dogwood	680 plants (8'x8' spacing)	
Hazel Alder (Alnus serrulata)	680 plants (8'x8' spacing)	
Rhododendron (East TN only)	680 plants (8'x8' spacing)	
Laurel (East TN only)	680 plants (8'x8' spacing)	
Virginia Sweetspire	680 plants (8'x8' spacing)	
Wild Hydrangea	680 plants (8'x8' spacing)	
Eligible Cuttings (from local sources/collected on site)		
Species	Amt/ac	Seeding Dates
Black Willow (tree)	4,840 (3'x3' spacing)	Dec 1 – Mar 1
Coastal Plain Willow		
Buttonbush		
Silky Dogwood		
Gray Dogwood		
Eastern Cottonwood (tree)		
American Elder		

\* PLS = Pure Live Seed